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10/676,141	09/30/2003	Peramachanahalli S. Ramkumar	884.A45US1	6415
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SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER	
			DAO, THUY CHAN	
			ART UNIT	PAPER NUMBER
			2192	
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			07/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/676,141

Applicant(s)

RAMKUMAR ET AL.

Examiner

Thuy Dao

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the amendment filed on May 7, 2008.
2. Claims 1-25 have been examined.

Response to Amendments

3. In the instant amendments, claims 1-3, 8, 15-16, 19, and 21-22 have been amended.

Response to Arguments

4. Applicants' arguments have been fully considered. However, they are not persuasive.

With respect to the newly added limitations, the Applicants asserted, "Here, Tseng fails to teach or suggest the amended limitation for integrating an existing simulator and its interfaces along with an existing emulator and its interfaces" (Remarks, page 7).

The examiner respectfully disagrees. Tseng explicitly teaches:

an existing emulator of the user (e.g., FIG. 3, elements 245, 255, 260, col.16: 51 - col.17: 7; col.2: 63 - col.3: 8; col.8: 34-50; col.20: 4-16);

an existing simulator of the user (e.g., FIG. 3, elements 245, 240, 235, col.2: 45-51; col.2: 63 - col.3: 8; col.5: 52-60);

a debugging interface providing tools, commands, and operations to the user (e.g., col.7: 51-60; col.3: 40 - col.4: 14)

for interfacing with the existing emulator of the user and the existing simulator of the user (e.g., col.7: 36-50; col.8: 60 - col.9: 14).

Accordingly, Applicants' assertions are not persuasive. The examiner respectfully maintains the 35 USC §102(b) rejection over claims 1-25.

Claim Rejections – 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Tseng (art of record, US Patent No. 6,009,256).

Claim 1:

Tseng discloses *a method, comprising:*

interacting with a debugging interface for receiving instructions to debug during a debugging session (e.g., col.7: 35-60; col.10: 32-47),

wherein the debugging interface provides tools, commands, and operations to a user for interfacing with an existing emulator of the user and an existing simulator of the user (e.g., col.7: 51-60; col.3: 40 – col.4: 14);

maintaining coherence between a simulation mode and an emulation mode by maintaining mappings between physical and logical resources during the debugging session (e.g., col.2: 40-56; FIG. 2, col.14: 28-55; col.16: 28-50); and

dynamically switching between the emulation mode associated with the existing emulator of the user and the simulation mode associated with the existing simulator of the user during the debugging session (e.g., col.2: 40 – col.3: 15; col.3: 40-59)

by stopping a current mode of operation during the session and accessing the mappings to switch to a new mode of operation during the session (e.g., col.1: 27-44; col.2: 52 – col.5: 61; col.11: 47 – col.12: 20),

wherein the debugging session interactively debugs the instructions and can be switched between the emulation mode and the simulation mode dynamically on user instruction or automated instruction (e.g., col.3: 9 – col.4: 14; col.8: 25-42; col.9: 7-13 and 45-53;).

Claim 2:

The rejection of claim 1 is incorporated. Tseng discloses *debugging a number of the instructions by the existing simulator while in the simulation mode* (e.g., col.3: 42-45; col.2: 45-51).

Claim 3:

The rejection of claim 1 is incorporated. Tseng discloses *debugging a number of the instructions by the existing emulator while in the emulation mode* (e.g., col.3: 42-45; col.4: 54-65).

Claim 4:

The rejection of claim 1 is incorporated. Tseng discloses *interacting further includes displaying, by the debugging interface, a current state of a resource associated with the instructions during the debugging session* (e.g., col.4: 2-65).

Claim 5:

The rejection of claim 1 is incorporated. Tseng discloses *interacting further includes receiving, by the debugging interface, manual commands to debug the instructions during the debugging session* (e.g., col.5: 18-40; col.9: 7-13).

Claim 6:

The rejection of claim 1 is incorporated. Tseng discloses *interacting further includes receiving, by the debugging interface, script commands to debug the instructions during the debugging session* (e.g., col.3: 9-45; col.8: 25-42; col.9: 45-53; col.9: 7-13).

Claim 7:

The rejection of claim 6 is incorporated. Tseng discloses *interacting further includes receiving by the debugging interface, a switch command to process the switching between the emulation mode and the simulation mode* (e.g., col.3: 9-45; col.8: 25-42; col.9: 45-53; col.9: 7-13).

Claim 8:

Tseng discloses a method, comprising:

establishing a debugging session to debug instructions, wherein the debugging session is interactive (e.g., col.7: 35-60; col.10: 32-47);

maintaining coherent states between logical and physical resources that are used to debug the instructions during the debugging session (e.g., col.2: 45-51; col.2: 63 – col.3: 8; col.5: 52-60)

by maintaining mappings between physical and logical resources used during the debug session (e.g., col.2: 40 – col.3: 15; col.3: 40-59); and

dynamically passing control of the debugging session between an existing simulator of a user that manages the logical resources and an existing emulator of the user (e.g., col.1: 27-44; col.2: 52 – col.3: 61; col.11: 47 – col.12: 20)

that manages the physical resources during the debugging session and while the instructions are still being executed (e.g., col.2: 40-56; col.16: 28-50; col.14: 28-55)) and

dynamically passing control by stopping the simulator and using the mappings to transition to the physical resources and initiating the emulator during the debugging session (e.g., col.3: 9-45; col.8: 25-42; col.9: 7-53).

Claim 9:

The rejection of claim 8 is incorporated. Tseng discloses *interfacing with a debugging interface that supplies a switch mode command, which drives the passing of control (e.g., col.2: 40 – col.3: 15; col.3: 40-59).*

Claim 10:

The rejection of claim 9 is incorporated. Tseng discloses *transmitting the coherent states to the debugging interface (e.g., col.7: 51-60; col.3: 40 – col.4: 14).*

Claim 11:

The rejection of claim 8 is incorporated. Tseng discloses *interfacing with a script that supplies a switch mode command, which drives the passing of control* (e.g., FIG. 3, col.16: 51 – col.17: 7).

Claim 12:

The rejection of claim 8 is incorporated. Tseng discloses *acquiring control from the simulator when control is with the simulator in response to receiving a switch mode command; and passing control to the emulator* (e.g., col.2: 63 – col.3: 8; col.8: 34-50; col.20: 4-16).

Claim 13:

The rejection of claim 8 is incorporated. Tseng discloses *acquiring control from the emulator when control is with the emulator in response to receiving a switch mode command; and passing control to the simulator* (e.g., col.2: 63 – col.3: 8; col.5: 52-60).

Claim 14:

The rejection of claim 8 is incorporated. Tseng discloses *receiving the instructions from a debugging interface* (e.g., col.3: 40 – col.4: 14).

Claim 15:

Tseng discloses *a system, comprising:*

a debugging interface to receive instructions that are to be debugged during a debugging session that presents an existing emulator and its interface along with an existing simulator and its interface to a user via the debugging interface (e.g., col.7: 51-60; col.3: 40 – col.4: 14);

a controlling interface to maintain coherence between a simulation mode and an emulation mode associated with the debugging session (e.g., col.2: 63 – col.3: 8; col.2: 45-51; col.7: 36-50),

wherein coherence is achieved via mappings maintained from logical resources associated with the simulation mode of the existing simulator of the user and

physical resources associated with the emulation mode of the existing simulator of the user (e.g., col.2: 4-56; col.14: 28-55; col.16: 28-50); and

a debugging execution interface to dynamically debug a number of the instructions while the debugging session is in the simulation mode or the emulation mode (e.g., col.7: 35-60; col.10: 32-47);

wherein the debugging interface communicates with the controlling interface and the controlling interface communicates with the debugging execution interface (e.g., col.2: 40 - col.3: 15; col.3: 40-59), and

wherein the debugging interface permits dynamic switching between the simulation and emulation modes while the instructions are being debugged (e.g., col.3: 9-45; col.8: 25-42; col.9: 45-53)

by stopping a current mode of operation during the session and using the mappings to dynamically switch to a new mode of operation during the session (e.g., col.1: 27-44; col.2: 52 – col.3: 61; col.11: 47 – col.12: 20).

Claim 16:

The rejection of claim 15 is incorporated. Tseng discloses *the debugging execution interface further includes: the existing simulator to process a number of the instructions while in the simulation mode; and the existing emulator to process a number of the instructions while in the emulation mode (e.g., col.8: 34-50; col.5: 52-60).*

Claim 17:

The rejection of claim 15 is incorporated. Tseng discloses *the debugging interface supplies the instructions to the controlling interface (e.g., col.3: 40 – col.4: 14).*

Claim 18:

The rejection of claim 15 is incorporated. Tseng discloses *the debugging interface supplies a switch mode command to the controlling interface and in response to the switch mode command the controlling interface sets at least one of the simulation mode and emulation mode and switches control of the debugging session by*

communicating with the debugging execution interface (e.g., col.7: 36-50; col.8: 60 – col.9: 14).

Claim 19:

Tseng discloses a machine accessible medium having associated data, which when accessed, carries out in a machine the method of:

establishing a debugging session to debug instructions, wherein the debugging session is interactive (e.g., col.7: 35-60; col.10: 32-47);

maintaining coherent states between logical and physical resources that are used to debug the instructions during the debugging session by maintaining mappings between the logical and the physical resources (e.g., col.2: 40-56; FIG. 2, col.14: 28-55; col.16: 28-50); and

dynamically changing control between simulation modes associated with the logical resources and processed as an existing simulator and its interface by a user and emulation modes associated with the physical resources that is processes as an existing emulator and its interface by the user during the debugging session (e.g., col.2: 40 – col.3: 15; col.3: 40-59) and

while the instructions are being debugged by stopping processing associated with the simulation modes and accessing the mappings to initialize and start the emulations modes (e.g., col.10: 32-47; col.1: 27-44; col.11: 47 – col.12: 20; col.8: 34-50).

Claim 20:

The rejection of claim 19 is incorporated. Tseng discloses the debugging session is established and driven by a debugging interface (e.g., col.7: 35-60).

Claim 21:

The rejection of claim 19 is incorporated. Tseng discloses control is changed between the existing simulator for the simulation modes and the existing emulator for the emulation modes (e.g., col.16: 51 – col.17: 7; col.20: 4-16).

Claim 22:

Tseng discloses *an apparatus in a computer accessible medium comprising:*
an existing simulator of a user (e.g., FIG. 3, elements 245, 255, 160, col.16: 51 – col.17: 7; col.2: 63 – col.3: 8; col.8: 34-50);
an existing emulator of the user (e.g., FIG. 3, elements 245, 240, 235, col.2: 45-51; col.2: 63 – col.3: 8; col.5: 52-60); *and*
a debugging session manager, wherein the debugging session manager dynamically manages a debugging session to debug instructions by maintaining mappings of logical resources to physical resources (e.g., col.7: 35-60; col.10: 32-47), *and*
wherein during the debugging session a number of the instructions are selectively processed by the emulator and a number of the instructions are selectively processed by the simulator (e.g., col.2: 63 – col.3: 8; col.5: 52-60), *and*
wherein switching from the simulator to the emulator is achieved while the instructions are being debugged by stopping a current mode of operation and accessing the mappings to switch to a new mode of operation during the debugging session (e.g., col.2: 63 – col.3: 8; col.2: 40 – col.3: 15; col.3: 40-59).

Claim 23:

The rejection of claim 22 is incorporated. Tseng discloses *the debugging session manager interacts with a debugging interface to receive the debug instructions and establish the debugging session* (e.g., col.10: 32-47).

Claim 24:

The rejection of claim 23 is incorporated. Tseng discloses *the debugging session manager selectively determines which of the instructions that the simulator and emulator process based on commands received from the debugging interface* (e.g., col.7: 51-60; col.3: 40 – col.4: 14).

Claim 25:

The rejection of claim 23 is incorporated. Tseng discloses *the debug session manager passes control between the simulator and the emulator as many times as is requested during the debug session* (e.g., col.7: 36-50; col.8: 60 – col.9: 14).

Conclusion

7. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570, respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thuy Dao/
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192